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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,151	11/12/2003	Michael R. Rothrock	PORTP004C1	7582
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LEVINE BAGADE LLP 2483 EAST BAYSHORE ROAD, SUITE 100 PALO ALTO, CA 94303			EXAMINER THAI, HANH B	
			ART UNIT	PAPER NUMBER
			2163	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/706,151

**Applicant(s)**

ROTHROCK, MICHAEL R.

**Examiner**

Hanh B. Thai

**Art Unit**

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on amendment filed 12/30/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 32,34-36 and 38-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32,34-36 and 38-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The following is Final Office Action in response to the communication received on December 30, 2005. Independent claims 32 and 35 have been amended. Claims 1-31, 33 and 37 have been cancelled. Claims 38-43 are newly added. Claims 32, 34-36 and 38-43 are pending in this application.
2. As per telephonic interview on December 29, 2005, examiner agreed that the proposed amendment would overcome the art of record but not agreed to allow the case.

### ***Response to Arguments***

3. Applicant's arguments regarding "generating a second tree from information encountered when traversing the first tree" of claim 32 (page 4) has been considered but are moot in view of the new ground of rejection.
4. Applicant's arguments regarding overwriting a node of the second tree" of claim 35 (page 5) has been considered but are moot in view of the new ground of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 32 and 34-36, 38, 40 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bournas et al. (US 6,061,679) in view of St. Denis et al. (US 6,490,592 B1).

Regarding claim 32, Bournas discloses a computer-implemented method of searching for best matches in a table storing information for dynamic call routing, the method comprising:

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- generating a first tree comprising first tree data (tree 302, Fig.3a, col.5, lines 6-16 and col.6, lines 8-16, Bournas discloses the first tree having first tree data “key mask of 1”);
- dynamically modifying the first tree data (col.9, line 40 to col.10, line 4, Bournas);
- updating the first tree data to the dynamically modified first tree data (col.9, line 40 to col.10, line 4 and lines 23-29, Bournas);
- traversing the first tree (col.6, lines 1-27 and col.14, lines 10-30, Bournas); and
- generating a second tree comprising second tree data (tree 302, Fig.3a and col.6, lines 8-15, Bournas discloses the second tree having second tree data “key mask of 32”).

Bournas, however, does not explicitly disclose saving the information that is encountered when traversing the first tree in the second tree. St. Denis, on the other hand, discloses method of generating a tree data structure including storing traversing data element into a tree structure (Fig.3; Fig.4A-F; col.6, line 51 to col.7, line 44 and col.8, lines 1-22, St Denis). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to create a tree by saving the traversing data element of another tree as taught by St. Denis to derive the invention as claimed. The motivation of doing so would have been to enable the longest match to a desired IP address to be located (col.1, lines 51-54, St. Denis).

Regarding claim 34, Bournas/St. Denis combination further discloses traversing the tree (col.6, lines 1-27 and col.14, lines 10-30, Bournas).

Regarding claim 35, Bournas discloses a computer-implemented method of searching for best matches in a table storing information for dynamic call routing, the method comprising:

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- generating a first tree comprising a first tree node having first tree data (tree 302, Fig.3a, col.5, lines 6-16 and col.6, lines 1-16, Bournas discloses the first tree having first tree data “key mask of 1”);
- receiving first and second values (col.6, lines 1-16, Bournas discloses a routing table with trees that has the values of 1, 32 and 64);
- building a second tree comprising a second tree node according to the second value (tree 302, Fig.3a and col.6, lines 1-16, Bournas discloses the second tree that has the second key value of 32);
- traversing the first tree node according to the first value (col.6, lines 1-27 and col.14, lines 10-30, Bournas);
- traversing the second tree node according to the second value (col.6, lines 1-27 and col.14, lines 10-30, Bournas); and
- editing information into the node of the second tree (col.8, lines 39-54 and col.10, line 23-29, Bournas).

Bournas, however, does not explicitly disclose overwriting data. St. Denis, on the other hand, discloses method of generating a tree data structure including overlapping data of a tree structure (Fig.3; Fig.4A-F; col.4, lines 43-53 and col. 5, lines 1-8, St Denis) and thus reads on the claimed “overwriting data”. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the claimed feature as taught by St. Denis. The motivation of doing so would have been to enable the longest match to a desired IP address to be located (col.1, lines 51-54, St. Denis).

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Regarding claim 36, Bournas/St. Denis combination discloses wherein editing comprises adding information (col.8, lines 58-66, Bournas).

Regarding claims 38 and 40, Bournas/St. Denis combination discloses wherein the first tree comprises an IP address and route (Fig.3; Fig.4A-F and col.4, lines 9-53, St Denis).

Regarding claims 42-43, Bournas/St. Denis combination discloses wherein the old data is larger of longer than the new data (Fig.3; Fig.4A-F; col.4, lines 9-53 and col. 5, lines 1-8, St Denis clearly showing that the old data on 300 is larger than the new data on 320).

6. Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bournas et al. (US 6,061,679) in view of St. Denis et al. (US 6,490,592 B1) and further in view of Forslow (US 6,973,057 B1).

Bournas and St. Denis combination discloses all of the claimed limitations as discussed above, except that the IP address is a Voice Over IP address. Forslow discloses public mobile data communication network including route, IP address and Voice over IP address (Fig.2-3 and col.15, line 53 to col.16, line 2, Forslow). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply Voice over IP address into the combination system of Bournas and St. Denis to derive the invention as claimed. The motivation of doing so would have been to provide a number of benefits such as tunneling flexibility, configurability and efficiency (abstract, Forslow).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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1. Ferguson et al. (US 5,909,440) disclose high speed variable length best match look-up in a switching device.

2. Coelho et al. (US 6,347,340 B1) disclose apparatus and method for converting a network message to a wireless transport message using a modular architecture.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh B. Thai whose telephone number is 571-272-4029. The examiner can normally be reached on 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh B Thai  
Examiner  
Art Unit 2163

March 16, 2006



**UYEN LE**  
**PRIMARY EXAMINER**